



**US Army Corps
of Engineers®**

Engineer Research and
Development Center

Electronic Charting for Navigation

Description and Background

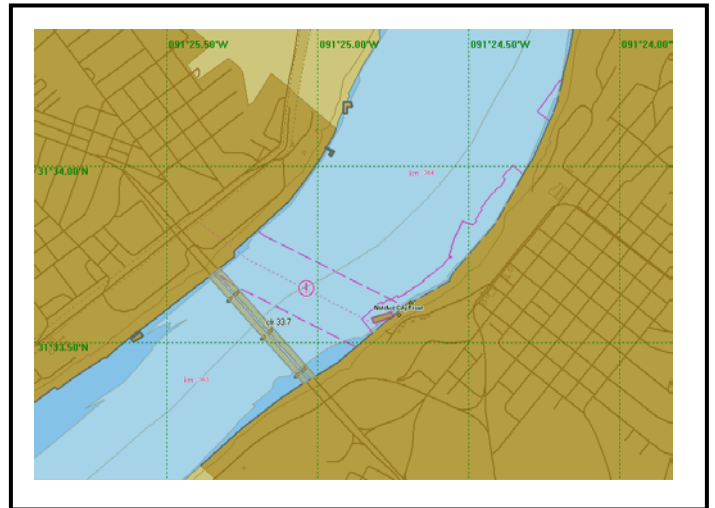
The U.S. inland navigation system consists of 8,200 miles of rivers maintained by the Corps of Engineers in 22 states, and includes 276 lock chambers with a total lift of 6,100 feet. The highly adaptable and effective system of barge navigation moves over 625 million tons of commodities annually, which includes coal, petroleum products, various other raw materials, food and farm products, chemicals, and manufactured goods. Following recommendations by the National Transportation Safety Board, the National Academy of Science and the American Waterways Operators, Congress directed the Corps of Engineers to develop and publish electronic charts for the inland waterways. Development of Inland Electronic Navigation Charts (IENCs) to cover the Mississippi River and tributaries thus began in 2001 with pilot projects on the Atchafalaya River in Louisiana and Lower Mississippi River near Vicksburg, Mississippi. These projects, which involved a combination of in-house and contract activities, were the first efforts to collect and convert inland waterway data, commonly used for river and channel maintenance, into the international S-57 hydrographic data exchange. This highly structured data format is commonly used for electronic chart applications and will be used for Corps IENCs.

Key Capabilities

Large-scale, accurate, and up-to-date IENCs, such as those being developed, enable electronic chart systems that provide accurate and real-time display of vessel position relative to waterway features, voyage planning and monitoring, training tools for new personnel and integrated display of river charts, radar, and Automatic Identification Systems.

Current Status

IENCs are available for download from the Corps E-Charting web site (www.tec.army.mil/echarts), and cover the Lower Mississippi River, Mile 220 AHP to 985, Upper Mississippi River, Mile 0 to 480, Ohio River, Miles 0 to 981, Black Warrior, Tombigbee, Alabama Rivers, Atchafalaya River (update of pilot IENC), and Red River. Further developments will include additional features and more accurate data from new waterway surveys or other sources. As further internal Corps of Engineers production capability is developed, ongoing dates will be published as new data is available from channel construction and maintenance.



Point of Contact

Tony Niles, tniles@tec.army.mil, (703) 428-6816, www.tec.army.mil/echarts